PLANT PATHOLOGY

NATURE RAMBLINGS
by Frank Thone

Persimmon Wilt Widespread

PERSIMMON wilt, a recently discovered fungus disease that kills persimmon trees in as little as two months, may wipe out this valuable and unique American species. Discovered only two summers ago in a limited area in Tennessee, it is now known to exist in practically all of the territory east and south of that state.

The present outlook is gloomy, admits R. Kent Beattie, plant pathologist of the U. S. Department of Agriculture. Unless resistant American strains can be found, it seems only a question of time until all the persimmon trees in the Southeast will be gone, just as the American chestnut went before the onset of the deadly fungus blight a generation or so ago. Then we shall have to comb the world for resistant species of persimmon, to replace the dead native trees.

Persimmon trees have several fields in which they are of major importance. Golf players, for example, will learn with a pang that the deadly fungus threatens the sole source of their drivers, brassies and other wooden clubs. No other wood has ever been found so satisfactory for this purpose.

Of even greater importance, however, is the persimmon's service as a soil-binding tree on eroding slopes. Soil conservation workers love the tree for the way it can drive a network of ropelike roots through slipping clay. The tree is also an important source of food for many wild animals and birds, as well as for domestic pigs and poultry in the South.

The big-fruited Japanese persimmon, which is coming increasingly into American markets, is immune to the fungus. But most of the trees in the Southeast have been grafted on American persimmon roots, so that these orchards are seriously endangered. Only in California, where Japanese persimmons are grown mainly on their own roots, or on the roots of another oriental persimmon species, does there appear to be less danger to this fruit crop.

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●RADIO

Lloyd Espenscheid of the Bell Telephone Laboratories will be guest scientist on "Adventures in Science" with Watson Davis, Director, Science Service. They will broadcast from a plane equipped with the new terrain clearance indicator, over the coast to coast network of the Columbia Broadcasting System, Thursday, Feb. 16, 7:15 p. m. EST, 6:15 p. m. CST, 5:15 p. m. MST, 4:15 p. m. PST. Listen in to your local station. Listen in each Thursday.

CHEMISTRY

How Science Discovered Saccharin's Sweetness

MANY of the older generation can remember the newspapers in 1884 and their stories of a new kind of "sugar" which was 500 times sweeter than the ordinary variety. And they may have read speculative tales, too, about the potency of the grain alcohol which could be made out of this new sugar. Actually what was reported was the discovery of the chemical saccharin, completely unrelated to sugar in a chemical sense, and without any fermentation properties.

Saccharin was discovered in the work of the graduate student C. Fahlberg in the laboratories of the then-famous Prof. Ira Remsen at the Johns Hopkins University.

Two stories exist about the discovery of saccharin's sweetness which bear retelling. One runs that Prof. Remsen was lecturing to his class one day with samples of many newly-prepared chemicals before him on the table. During class he unconsciously poked his pencil into several samples.

Later, in his office, he puzzled over a tough problem and touched the tip of the pencil point to his lips. Its amazing sweetness sent him scurrying back to the lecture hall where he systematically tasted all the chemicals until he found the one prepared by Fahlberg at his direction.

The other story, related by Fahlberg in Berlin in 1904 at a chemical congress, tells how he (Fahlberg) had been working all day in the laboratory. After washing his hands he went home to supper, but the bread and everything he handled tasted very sweet. He soon found that the sweetness came not from the food but from his hands and even his forearms.

The rest is quite similar, with Fahlberg tasting all the chemicals he had encountered that day. Remsen and Fahlberg's original paper on the discovery of saccharin was published in 1879. Their experiments were performed just 61 years ago, in 1878. The press of 1884 was only five years late with the news.

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VITAL STATISTICS

Aging Population Increases Death Rate From Falls

A NEW angle on the increasing age of our population appears in statistics on fatal accidents in the United States compiled by the Bureau of the Census. The figures, covering the year 1936, show that falls are pushing automobile accidents as cause of death.

During 1936, latest year on which figures are available, there were 110,052 deaths from accidents of all types. Nearly one-third of these fatal accidents, 32 per cent, were automobile accidents. Falls were second in importance, accounting for almost one-fourth, or 24 per cent, of the fatal accidents during the year.

"Deaths from falls have been increasing even more rapidly than those caused by automobiles," states the official report.

While automobile accident deaths increased 11 per cent. during the six-year period from 1930 to 1936, deaths from falls increased over 22 per cent.

The reason for this surprising state of affairs appears when the figures are broken down into age groups. Young persons are most liable to accidental deaths, nearly half the fatal accidents in 1936 occurring among persons under 45 years. More than half of all deaths from injury by fall, however, happen to persons over 65 years.

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